

Amendments to the Specification:

Page 1, before line 8, please insert the heading as follows:

--BACKGROUND OF THE INVENTION--

Page 3, before line 12, please insert the heading as follows:

--SUMMARY OF THE INVENTION--

Please amend the paragraph on page 3, lines 15 to page 4, lines 21 as follows:

This object is solved with a method and catalytic converter according to the present invention. ~~claim 1, as well as a catalytic converter according to claim 14.~~ If reference is made to an approximately cylindrical tube section or an approximately cylindrical monolith, this also includes oval or polygonal tube sections and monoliths. In addition, a catalytic converter in general is understood to mean a device for cleaning exhaust gases, which can additionally or instead of a monolith include a particle filter or a soot filter. For a method according to the invention, a tube section with several different cross-sectional surfaces on the inside is provided, wherein a monolith packet is pressed in from a tube end with a larger or the largest inside cross-sectional surface or clear width. For example, a tube section can be selected, which has a first longitudinal section with larger inside cross-sectional surface and an adjoining second longitudinal section with smaller inside cross-sectional surface. The larger inside cross-sectional surface is selected such that the insertion of the monolith packet will not present any problems. However, the positioning mat is still compressed to generate the restoring forces. The subsequent longitudinal section with smaller inside cross-sectional surface, on the other hand, is selected so that the highest possible compression of the positioning mat occurs, thus generating the highest possible restoring forces. In contrast, the use of a tube section with on the whole reduced inside cross-sectional surface would engender the danger of the positioning mat getting snagged at the beginning of the pressing-in action, e.g. in the frontal region of the tube section,

and that only the monolith would be pushed farther into the tube section. However, if a larger inside cross-sectional surface and accordingly a gap with larger gap measure exist at the pressing-in end of the tube section, the monolith packet can be pressed into the tube section without a change in the desired position of the positioning mat, relative to the monolith. If the front end of the monolith packet that points in pressing-in direction later enters the longitudinal tube section with reduced cross section, the region in front of the positioning mat is already stabilized sufficiently by the tube section, so that a change in the desired mat position is prevented. A tube section pre-manufactured in this way is arranged such that the narrowed longitudinal section encloses the frontal region of the monolith that points toward the inflow funnel (~~claim 15~~).

Please amend the paragraph on page 5, lines 1-15 as follows:

The production of a catalytic converter according to the invention can also occur such that a monolith packet is pressed from each tube end into the tube section. In that case, both tube ends have a larger cross sectional inside surface than at least one region, arranged in-between, with reduced cross sectional inside surface (~~claims 2 and 16~~). It is preferable if a tube section is used, for which the inside cross-sectional surface is reduced in stages, in the form of several longitudinal sections, wherein the inside surface of the respective longitudinal sections extends parallel to the central longitudinal axis of the tube section. In other words, the inside surface of the respective longitudinal section forms a cylinder jacket with circular, oval or polygonal periphery, which extends coaxial to the central longitudinal axis of the tube section. For one embodiment variant, the successive longitudinal sections in pressing-in direction are arranged ~~according to claims 4 and 17~~ in the order of decreasing inside cross-sectional surfaces. The positioning mat is compressed more and more with increasing depth for pressing in, until it experiences the highest compression at the end of the pressing-in operation, in the region of the tube end pointing in pressing-in direction.

Please amend the paragraph on page 5, lines 16 to page 6, line 5 as follows:

As alternative to a tube section that is reduced in stages, it is also possible to use a tube section with continuously decreasing or conically tapered inside cross-sectional surface for a longitudinal section. A longitudinal section of this type can extend over the complete length of the tube section. The inside cross-sectional surface continuously decreases from one tube end to the other tube end (~~claims 6, 7, 19 and 20~~). The inside surface of a cone-shaped longitudinal section thus forms the jacket surface of a truncated cone, wherein the periphery of this longitudinal section can also be circular, oval or polygonal. The reduction in stages as well as the continuous, cone-shaped narrowing is linked to a stiffening of the tube section or the catalytic converter housing. As compared to the continuous narrowing of the inside cross-sectional surface, a tube section that is reduced in stages has the advantage of resulting in higher friction between positioning mat and tube section.

Please amend the paragraph on page 6, lines 6-11 as follows:

~~According to claims 8 and 21, a~~ A tube section 2 comprises longitudinal sections that are conically tapered from its tube ends toward the center. With a tube section of this type, it is useful if respectively one monolith packet is pressed in from each tube end. Finally, it can be advantageous if a tube section comprises at least one longitudinal section with an inside surface that extends parallel to its central longitudinal axis and at least one cone-shaped longitudinal section (~~claims 9 and 22~~).

Please amend the paragraph on page 6, line 12 to page 7, line 3 as follows:

~~For a method according to claim 10 and a catalytic converter according to claim 23, it~~ It is furthermore advantageous if the narrowed or the conically tapered longitudinal sections extend only over a partial peripheral region of the tube section. Monoliths with an oval or elliptical cross section can tolerate a higher pressure load in the flat areas, that is to say in the region of the smaller elliptical axis, than in the side regions with higher curvature of the longer elliptical axis.

It is therefore advantageous if the total force of pressure is distributed such that the flat sides of the monoliths are subjected to a higher load than the side regions with stronger curvature. To ensure this, a tube section is used that is not narrowed over its total periphery, but only in its regions assigned to the respective flat sides of the monolith. Thus, it is possible to admit the monolith on the whole with an increased radial force of pressure without the danger of a monolith break. The reduction in the above-mentioned peripheral regions can be selected such that following the pressing in of a monolith packet, a uniform gap measure over the complete area is achieved for the gap space.

Page 9, before line 1, please insert the heading as follows:

--BRIEF DESCRIPTION OF THE DRAWINGS --

Page 10, before line 10, please insert the heading as follows:

--DETAILED DESCRIPTION OF THE INVENTION --

Please amend the paragraph on page 10, line 10 to page 11, line 14 as follows:

For the catalytic converter shown in Figure 1, a tube section 2 forms the positioning area 11 of the housing 4, which accommodates two monoliths 1a, 1b. The tube section 2 has an inflow funnel 3 3a attached on one front and an outflow funnel 3b on the other front. The housing 4 of the catalytic converter thus is composed of the tube section 2, the inflow funnel 3 and the outflow funnel 3b. The tube section 2 is cylinder-shaped, but can also be oval or have any other optional outline. A gap space 6 with ring-shaped cross section is provided between the peripheral region 15 of monoliths 1a, 1b and the inside surface 5 of tube section 2. A positioning mat 7 is embedded with radial pre-stressing in the gap space 6. The pre-stressing is due to the fact that the positioning mat has a greater thickness prior to the installation than the gap measure 8 of the gap space 6. The positioning mat is a so-called expanding mat, meaning it consists essentially of mineral fibers with

embedded exfoliated mica particles and the organic binder. In principle, mats without exfoliated mica particles can also be used. The tube section is divided into two longitudinal sections 9, 10. The longitudinal section 9 has a smaller diameter 12 and a smaller inside cross-sectional surface than the longitudinal section 10 that follows in flow direction 13. Accordingly, the longitudinal section 9 with inserted monolith 1a has a smaller gap measure 8a than the longitudinal section 10. The compression of the positioning mat 7 is increased in the longitudinal section 9. The radial restoring forces exerted by the positioning mat 7 onto the inside surface 5 and on the peripheral region 15 of monolith 1a are increased accordingly. As a result of the increased compression of the positioning mat 7 in the longitudinal section 9, an erosion protection for the frontal edge region 17 of the positioning mat can be omitted. The mat fibers are compressed to such a degree in this area that an erosion through the arriving exhaust flow is prevented or at least reduced. The inside surface 5a of the tube section, which is assigned to a longitudinal section ~~5~~ 9, 10, extends parallel to its central longitudinal axis 32 or forms a cylinder jacket that extends coaxial to the central longitudinal axis 32 of the tube section.

Please amend the paragraph on page 11, line 15 to page 12, line 10 as follows:

In order to produce the catalytic converter shown in Figure 1, for example, a monolith packet 17 of two monoliths 1a, 1b with a positioning mat 7 that is wrapped in one layer around the monoliths is pressed in pressing direction 18 into a tube section 2. The tube section 2 is held inside a tube holder 20. The longitudinal section 10 with its larger inside cross-sectional surface and its larger diameter 12 extends to the tube end 21 of tube section 2, which points counter to the pressing in direction 18. The longitudinal section 10 changes by means of a stage or a slanted shoulder 22 into the narrowed longitudinal section 9. The longitudinal section 9 extends to the other tube end 23 of the tube section 2. The difference between the diameter 12 ~~{sie}~~ of the reduced longitudinal section 9 and the diameter 24~~{sie}~~ of the non-reduced longitudinal section 10 amounts to only a few tenths of millimeters. In the Figures 1 – 11, these differences are exaggerated for reasons of clarity and also for drawing reasons. In order to make it easier to

insert the monolith packet 17 into the tube section 2, an insertion funnel 25 is fitted onto the upper front end of tube holder 20. The slanted insertion area 26 of the insertion funnel 25 essentially extends to the tube end 21 of tube section 2. The distance 19 between the two monoliths 1a, 1b is ensured by an approximately ring-shaped spacer 27, for example made of ice or dry ice. The monolith packet 17 is inserted into the tube section 2 by a pressing die 28 that is pushed forward in pressing direction 18.

Please amend the paragraph on page 12, line 11 to page 13, line 8 as follows:

Figure 7 shows the tube end 21 of tube section 2, with partially inserted monolith packet 17 for explaining the starting phase of the pressing-in operation. The ~~right~~ bottom half of the Figure illustrates the problems that can occur with a gap 6 with relatively small gap measure 8a. In the starting phase of the pressing-in operation, in which the monolith packet 17 is not yet completely inserted or is only slightly inserted into the tube section 2, the monolith 1a is surrounded only loosely by the positioning mat 7. If a narrow gap space 6 exists between the monolith 1a and the inside surface 5 of tube section 2, the positioning mat 7 encounters such a high resistance upon entering the tube section 2 that it remains behind as the monolith 1a is pushed forward in pressing direction 18, so that finally only the monolith is inserted into the tube section 2. However, if, as shown in the ~~left~~ top half of Figure 7, the longitudinal section 10 ~~9~~ that adjoins the tube end 21 has a larger inside cross-sectional surface and a larger clear width 12, the positioning mat 7 is accordingly compressed less. The frictional resistance between the inside surface 5a of the longitudinal section 10 ~~9~~ and the positioning mat 7 is also correspondingly smaller. The final compression of the positioning mat 7 occurs after a region of the monolith packet, which corresponds to the length of section 10 ~~9~~, has already been inserted into the tube section 2. The positioning mat 7 is then clamped down or stabilized in this region, such that a pushing back of the positioning mat during the transition to the narrowed gap with its smaller gap measure 8a is practically impossible, as can be seen in Figure 7.

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Please amend the paragraph on page 16, lines 13-17 as follows:

Figure 12 finally shows an exemplary embodiment where a tube section 2 comprises two longitudinal sections 36a, 36b, which are conically tapered toward its center. Accordingly, the gap space 6 is continually reduced from the tube ends 23, 21 toward the center. When producing a catalytic converter by using a tube section of this type, a monolith packet 17 is pressed into each tube end 21, 23 in directions 18.